



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,791	09/10/2003	Timo Kivinen	KOLS.049PA	5622

7590                    07/24/2007  
Hollingsworth & Funk, LLC  
Suite 125  
8009 34th Avenue South  
Minneapolis, MN 55425

EXAMINER
PHAN, HUY Q

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
07/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/659,791	KIVINEN, TIMO
	<b>Examiner</b>	<b>Art Unit</b>
	Huy Q. Phan	2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 June 2007.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-14 and 16-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/14/2007 has been entered.

***Response to Amendment***

2. This Office Action is in response to Amendment filed on date: 06/14/2007.  
Claims 1-14 and 16-22 are still pending.

***Response to Arguments***

3. Applicant's arguments, see REMARKS, have been fully considered but they are not persuasive.

A) Applicant argued, with regard to the rejection of claim 21 under 35 U.S.C. §112, that the claim 21 is not a "single means" claim. The examiner respectfully disagrees with the applicant's argument and contends that the claim 21 is a "single means" claim. MPEP (2164.08(a)) states:

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Since, claim 21 specifically recites a network element, which does not appear in combination with another elements; therefore, claim 21 is a single means claim.

B) Applicant's arguments, with respect to the claimed rejection based on the combination of Kimoto and Itabashi, have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7 and 21 are rejected under 35 U.S.C. 112 because the claim is a single means claim. MPEP (2164.08(a)) states:

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Since, claims 7 and 21 specifically recite a network element, which does not appear in combination with another elements; therefore, claim 21 is a single means claim.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-14 and 16-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Giniger (US-6,985,742).

Regarding claim 1, Giniger discloses a method for determining cell-specific location information (fig. 2) to be used in a mobile communication network (fig. 1), the method comprising

encrypting the cell-specific location information on at least one cell of the mobile communication network to be used in the particular mobile communication network (col. 6, lines 24-31) by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66), determining substantially the geographical coverage area of the cell (fig. 2, and col. 8, lines 62-66), and

storing the encrypted, cell-specific location information and the geographical coverage area information on the cell in a database (fig. 1, 107) such that the two aspects of the information are interlinked (col. 6, lines 6-12).

Regarding claim 2, Giniger discloses the method of claim 1, further comprising establishing a data transfer connection from a service provider (fig. 1, 105) external to the mobile communication network to the database (107) in order to use the encrypted, cell-specific location information and the geographical coverage area information on at least one cell in cell positioning services (fig. 2; also see col. 6).

Regarding claim 3, Giniger discloses the method of claim 1, further comprising encrypting, in a mobile station connected to the mobile communication network, the cell-specific location information on the mobile station to be used in the mobile communication network by using the predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66).

Regarding claim 4, Giniger discloses the method of claim 3, further comprising transmitting a cell positioning service request from the mobile station to the service provider (col. 8, lines 51-57), the cell positioning service request including the encrypted (col. 6, lines 24-31), cell-specific location information on at least one mobile station, in response to the request, retrieving from the database through the data transfer connection the geographical coverage area information corresponding with the encrypted (col. 6, lines 6-12), cell-specific location information on at least one mobile station in the request (col. 8, lines 51-57), and transmitting a cell positioning service message to the mobile station (col. 6, lines 42-48), the cell positioning service message including at least the geographical coverage area information (col. 9, lines 1-6).

Regarding claim 5, Giniger discloses the method of claim 4, further comprising transmitting the geographical coverage area information in the cell positioning service message as graphic map information (col. 3, lines 24-37 or col. 5, lines 40-43).

Regarding claim 6, Giniger discloses the method of claim 1, further comprising storing the encrypted, cell-specific location information and the geographical coverage area information on the cells of several different mobile communication networks (fig. 1; GPS (109) and cellular network (101)) in the database such that the two aspects of the information are interlinked (col. 6, lines 6-12).

Regarding claim 7, Giniger discloses a system for determining cell-specific location information to be used in a mobile communication network, wherein at least one network element of the mobile communication network is configured to encrypt the cell-specific location information (col. 6, lines 24-31) on at least one cell (fig. 2) to be used in the mobile communication network by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66),

at least one network element of the mobile communication network is configured to determine substantially the geographical coverage area of the cell (fig. 2, and col. 8, lines 62-66), and

the encrypted (col. 6, lines 24-31), cell-specific location information and the geographical coverage area information on the cell are configured to be stored in a database (fig. 1, 107) such that the two aspects of the information are interlinked (col. 6, lines 6-12).

Regarding claim 8, Giniger discloses the system of claim 7, wherein a connection (col. 6, lines 24-31) is provided from a service provider (fig. 1, 105) external to the mobile communication network to the database in order to use the encrypted, cell-specific location information and the geographical coverage area information on at least one cell in cell positioning services (col. 6, lines 6-12).

Regarding claim 9, Giniger discloses the system of claim 7, wherein a mobile

station (fig. 1, 103) connected to the mobile communication network is configured to encrypt the cell-specific location information on the mobile station to be used in the mobile communication network by using the predetermined encryption algorithm (col. 6, lines 24-31).

Regarding claim 10, Giniger discloses the system of claim 9, wherein the mobile station is configured to transmit a cell positioning service request to the service provider (col. 8, lines 51-57), the cell positioning service request including the encrypted (col. 6, lines 24-31), cell-specific location information on at least one mobile station (fig. 2), in response to the request, the service provider is configured to retrieve from the database the geographical coverage area information corresponding with the encrypted (col. 6, lines 6-12), cell-specific location information on at least one mobile station in the request, and to transmit a cell positioning service message to the mobile station (col. 6, lines 6-12), the cell positioning service message including at least the geographical coverage area information (col. 9, lines 1-6).

Regarding claim 11, Giniger discloses the system of claim 10, wherein the service provider is configured to transmit the geographical coverage area information in the cell positioning service message as graphic map information (col. 3, lines 24-37 or col. 5, lines 40-43).

Regarding claim 12, Giniger discloses the system of claim 10, wherein the cell positioning service message further includes at least some of the following information:

location information on at least one other mobile station

location information on at least one service determined in the service request

(col. 5, lines 7-9)

suggested route to a target destination determined in the service request

("travelers" of col. 5, line 49 and "routing guidance" of col. 3, lines 24-67)

estimated length of distance to be travelled and time used by the mobile station on alleged route

information on a cell-specific service (col. 5, lines 44-51).

Regarding claim 13, Giniger discloses the system of claim 7, wherein the encrypted, cell-specific location information and the geographical coverage area information on the cells of several different mobile communication networks (fig. 1; GPS (109) and cellular network (101)) are configured to be stored in the database such that the two aspects of the information are interlinked (col. 6, lines 6-12).

Regarding claim 14, Giniger discloses a mobile station (fig. 1, 103), which is configured to

establish a connection to a mobile communication network (col. 6, lines 24-31),

encrypt the cell-specific location information on the mobile station (col. 6, lines 24-31) to be used in the mobile communication network by using a predetermined

encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66)

transmit a cell positioning service request to a service provider providing a cell positioning service (col. 8, lines 51-57), the cell positioning service request including the encrypted, cell-specific location information on at least one mobile station (col. 6, lines 24-31), and

receive a cell positioning service message from the service provider (col. 6, lines 31-36), the cell positioning service message including at least the geographical coverage area information (fig. 2, and col. 8, lines 62-66) corresponding with the encrypted (col. 6, lines 31-36), cell-specific location information (col. 9, lines 1-6, also see col. 5).

Regarding claim 16, Giniger discloses the mobile station of claim 14, which is further configured to present the geographical coverage area information in the cell positioning service message as graphic map information (col. 3, lines 24-37 or col. 5, lines 40-43).

Regarding claim 17, Giniger discloses the mobile station of claim 14, which is further configured to receive from the service provider the cell positioning service message including at least one aspect of the encrypted (col. 6, lines 31-36), cell-specific location information and the geographical coverage area information linked thereto (col. 6, lines 6-12), determine the encrypted, cell-specific location information corresponding

with its location (col. 6, lines 24-31), and update its current location into the geographical coverage area information in the cell positioning service message (col. 6, lines 60-63).

Regarding claim 18, Giniger discloses the mobile station of claim 14, which is further configured to determine the encrypted, cell-specific location information corresponding with its location, in response to a change in location (col. 6, lines 60-63), store successive encrypted, cell-specific location information, transmit a cell positioning service request to a service provider providing a cell positioning service (col. 8, lines 51-57), the cell positioning service request including the encrypted, cell-specific location information stored in memory, and receive a cell positioning service message from the service provider (col. 6, lines 6-12), the cell positioning service message including at least the geographical coverage area information corresponding with the encrypted, cell-specific location information stored in memory (col. 9, lines 1-6).

Regarding claim 19, Giniger discloses the mobile station of claim 14, including computer program means (since, the "mobile communication device comprises a laptop computer" see claim 12) for encoding cell-specific location information on mobile stations to be used in a mobile communication network into encrypted cell identities (col. 6, lines 24-31) according to a predetermined algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66), and computer program means for decoding the encrypted cell identities into cell-specific

location information on a mobile station (col. 6, lines 31-36) to be used in the mobile communication network according to a predetermined algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66).

Regarding claim 20, Giniger discloses the mobile station of claim 19, including computer program means (since, the "mobile communication device comprises a laptop computer" see claim 12) for generating a cell positioning service request to a service provider providing a cell positioning service (col. 8, lines 51-57), the cell positioning service request including the encrypted cell identity of at least one mobile station (col. 6, lines 24-31).

Regarding claim 21, Giniger discloses a network element (fig. 1, 103 and/or 107) for a mobile communication network (fig. 1), wherein

the network element is configured to encrypt cell-specific location information (col. 6, lines 24-31) on at least one cell (fig. 1, A2) to be used in the mobile communication network by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66),

the network element is configured to determine substantially the geographical coverage area of the cell (fig. 2, and col. 8, lines 62-66), and

the network element is configured to store the encrypted, cell-specific location information and the geographical coverage area information on the cell in a database such that the two aspects of the information are interlinked (col. 6, lines 6-12).

Regarding claim 22, Giniger discloses a unit for a mobile station (fig. 1, 103), the unit comprising:

a computer readable medium including a program executable by a computer (since, the "mobile communication device comprises a laptop computer" see claim 12) for encoding cell-specific location information (col. 6, lines 24-31) on at least one cell (fig. 1, A2) by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66), and for delivering the encrypted cell identities further to the actual application program of the cell positioning service (col. 8, lines 51-57 and col. 6, lines 24-31).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Copley discloses that "the portable device 134 encrypts and sends to the monitoring system the portable device identifier along with the location information" (see specification).
- b) Maeda discloses that "Position information measured by a terminal of a mobile body is encrypted and transmitted to a position recording center" (see specification).

c) Veerasamy discloses that "The use of encryption-decryption keys enables the mobile station to transmit its location securely over-the-air and through public data networks" (see specification).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy Q Phan whose telephone number is 571-272-7924. The examiner can normally be reached on 8AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huy Phan

  
GEORGE ENG  
SUPERVISORY PATENT EXAMINER